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Letter to the Editor

ADMINISTRATION OF INTRAVENOUS IMMUNOGLOBULIN IN TWO CHILDREN WITH HYPOGAMMAGLOBULINAEMIA DUE TO PROTEIN LOSING ENTEROPATHY

Sir, Intravenous immunoglobulins (IVIG) have been extensively shown to be able to change the management of primary antibody deficiency (Nolte *et al.*, 1979) and also have been successfully used in the control of some secondary IgG deficiency as in leukaemia and in burns (Dwyer, 1984).

We have studied the use of IVIG in two children with hypogammaglobulinaemia secondary to protein losing enteropathy. Kinetic studies of IgG clearance in such patients are not currently available. The first patient was an 8 year old boy with intestinal lymphangiectasia and the second one a 10 year-old boy with Crohn's disease. In both intestinal protein loss was shown by the ^{51}Cr clearance test with marked hypoalbuminaemia and low levels of serum IgG. The child with intestinal lymphangiectasia had also deficient cell mediated immunity because of the concomitant lymphocytopenia. Both patients suffered from recurrent bacterial infections of the skin, lung and gastrointestinal tract.

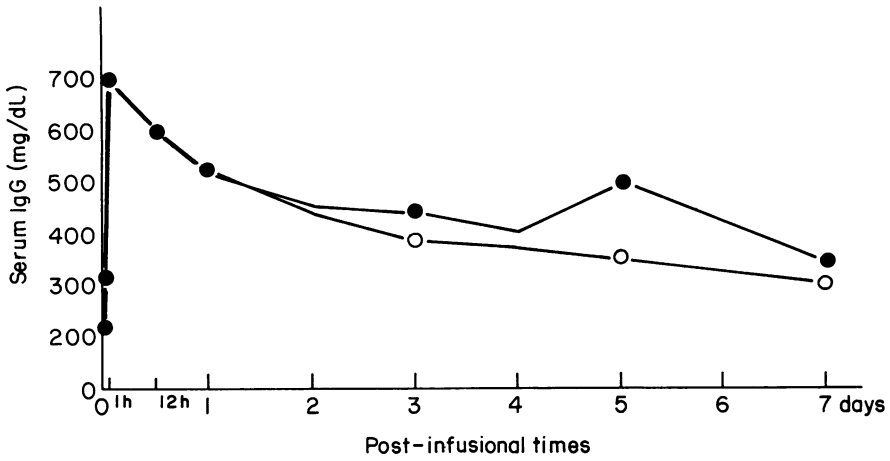

Fig. 1. Serum IgG values before and after infusion of 200 mg/kg IVIG in two patients with protein losing enteropathy. (●) patient 1, (○) patient 2.

To investigate whether IVIG may be an effective method for IgG replacement in these patients, a commercially available intact alkylated IgG preparation (IMMUNO) was infused in a single dose of 200 mg/kg, when they were free of infection. Serum IgG was measured by immunodiffusion before and after infusion (Fig. 1). IgG rose quickly to levels considered as effective; it fell more quickly than in patients with primary and other secondary IgG deficiency (Pirofsky, Campbell & Montanaro, 1982), but both patients still had serum IgG higher than 350 mg/dl 7 days after infusion. In the first patient a previous administration of intramuscular IgG (200 mg/kg) had not produced a significant elevation of serum IgG at 5 and 10 days. These observations show that a single dose of IVIG (200 mg/kg) in children with IgG deficiency due to gastrointestinal loss can produce a significant rise of IgG for a week. The fall of serum IgG, faster than in primary IgG deficiency which presumably resulted from intestinal loss, may limit use of IVIG as chronic

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replacement therapy, but suggest that IVIG may be an effective supplement to antibiotic therapy in the course of serious bacterial infections.

Keywords intravenous immunoglobulin immunodeficiency protein losing enteropathy

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